

April water supply summary, the D-word, and Long Term Climate forecasting.

(Note; users may have to cut and paste the 2 longer links given in today's newsletter. The mailman plain text format cannot handle lengthy hyperlinks, so clicking will only work with those that are shorter, and clearly linkable. Also, the format carriage returns long sentences in a paragraph. Apologies.)

April 1 statewide conditions can be summarized as the following:

Snowpack 40% of average (has fallen to 32% of normal, or 8", on average statewide, as of April 18)

Precipitation 65% of average

Runoff 60% of average

Reservoir Storage 110% of average

Please see Bulletin 120 April, 2007 for graphs, charts, and table information:

<http://cdec.water.ca.gov/snow/bulletin120/>

A dry, and sunny March lead to a loss of 20 percentage points in snowpack water content, rather than the usual gain in the month. River year-to-date runoff at this time last year was 155% of average.

Questions and concerns about drought abound, with the below normal snowpack and Southern California currently seeing one of its driest water years on record. Many locations there have received between 18–25% of normal precipitation since July 1, 2006. Water supply, agriculture, and natural ecosystems each have their own definition of drought. From some perspectives, drought may be an appropriate term for Southern California, given it's current conditions. However, from a state water storage perspective, the word drought is, at this time, premature. Reservoir storage is above normal for this time of year, thanks to carryover supplies. Groundwater levels are also benefiting from previous wet years.

One depiction of drought conditions on a nationwide basis is provided by the U. S. Drought Monitor. The Drought Monitor is a collaborative product of climate scientists and local specialists that relies primarily on measures of precipitation and soil moisture. Other elements such as water storage are included subjectively to create a general

picture of drought conditions. To see the Drought Monitor map which is updated weekly, go to:

<http://drought.unl.edu/dm/monitor.html>

See Jan Null's Golden Gate Weather Services for additional information and links:

<http://ggweather.com/>

California water supply is, in general, a highly engineered system designed to deal with dry years by capitalizing on multiple sources, and utilizing carryover capabilities in the state's reservoirs. Coming off several wet to above normal years, we have a buffer for this year, at least. Successive dry seasons would cause greater stress. The Department of Water Resources manages a drought preparedness page at:

<http://watersupplyconditions.water.ca.gov/>

and provides a lengthy historical write-up about dry periods in California, and long-term past California climatic conditions at:

<http://watersupplyconditions.water.ca.gov/background.cfm>

Interestingly, long-range forecast models are having a tougher time with La Nina/ El Nino forcing patterns. Those computer models are providing monthly to seasonal climate averages, and it has been tough going the past several cycles. Perhaps the models are not well parameterizing (mathematically representing) additional, lesser understood forcing or feedback processes that have an impact on larger time scale predictions.

The El Nino Southern Oscillation update of April 16 states there is a neutral pattern currently in place, but a La Nina pattern could develop over the Pacific in coming months:

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf

The Climate Prediction Center outlook for the early summer (May-June-July) shows above average temperatures for all of eastern California, from the valleys over the Sierra, and throughout the desert Southwest. That same period shows a slightly increased chance for drier than normal conditions for the southern half of California.

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead02/off_index.html

Current weather forecast:

A cold upper level low situated over Northern Nevada is causing all the brrrr and brrrrreeze locally. As it tracks into the Rockies, we'll warm a bit. The incoming system for Friday looks to have more of a coastal path, rather than Sierra. Quantitative precip forecast for the Feather River Basin is about a tenth of an inch Friday. The following front is more substantial, and will arrive this weekend. Goodly, welcome 1"-plus totals are forecast for higher elevations across Northern California.

The Sacramento area ought not have much rain on Saturday, so plan for outdoor activities that day. Sunday will be the wetter/ stormier day this weekend. Snow levels will be higher; near 6,000'. This system is stronger, and will dig further south, into Southern California early Monday.

(EL)

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